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APPLICANT:	Gutierrez et al.	)	
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SERIAL NO.:	09/746,044	)	Examiner: J. Howard
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FILED:	December 22, 2000	)	Art Unit: 1764
		)	
TITLED:	LUBRICATING OIL COMPOSITION	)	

Atty. Docket No. 2000L003

Assistant Commissioner for Patents  
Washington, DC 20231

**DECLARATION UNDER 37 CFR SECTION 1.132**

I, Antonio Gutierrez, hereby declare and say as follows:

1. I received B.S. and M.S. degrees in Chemistry from Rutgers University in 1971 and 1982, respectively. I was employed by Exxon Chemical Company from 1969 to 1999, and by the successor in interest to their lubricating oil additives business, Infineum USA L.P. from 1999 to the present. During my period of employment I have been engaged continuously in the research and development of lubricating oil additives and compositions. I am a named inventor on over 180 U.S. patents, and the above-identified patent application.
2. I give this declaration in order to further demonstrate the unexpected nature of the results achieved with the lubricating oil compositions claimed in the above-referenced patent application. The data presented in the specification demonstrated the improved sludge handling characteristics of lubricating oil compositions containing a high molecular weight dispersant and the claimed linked, polycyclic aromatic compounds of the invention, compared to lubricating oil compositions containing only the high molecular weight dispersant, and a combination of a high molecular weight dispersant and an equivalent amount of the corresponding, unlinked polycyclic aromatic compound. The following data further demonstrates the improved sludge handling properties of lubricating oil compositions of the present invention compared to lubricating oil compositions containing a high molecular weight dispersant in combination with a linked, monocyclic aromatic compound. All tests were conducted by me, or under my direct supervision and control.

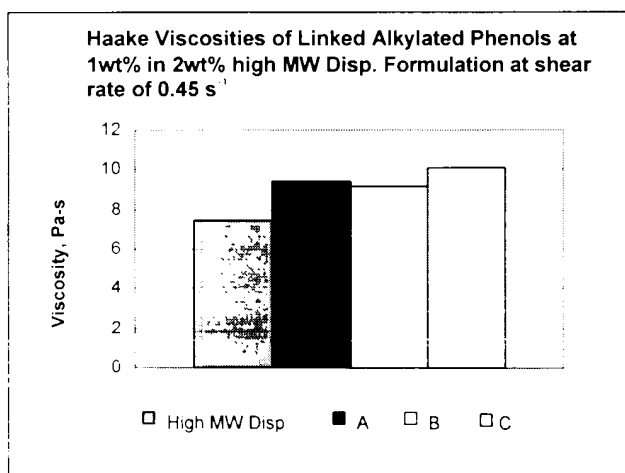
3. The synthesis of Example B of the specification was repeated using dodecyl phenol instead of dodecyl naphthalene to provide samples of an alkylated, linked, monocyclic aromatic compound. Although a different acid catalyst was employed in the synthesis, the acid catalyst used is not believed to affect the performance of the compound formed. The synthesis and composition of the resulting samples is summarized in Table 2.1.3:

### 2.1.3 Linked Alkylated Phenols

	Catalyst	CH <sub>2</sub> O C12-phe	Temp ° C	Time hr	Estimated oligomers distribution by GPC					
					Mono %	di- %	Tri %	Tetra- %	>4 %	Prod Conv, %
		Mole ratio								
A	p-tosh	3 to 1	120	2	25.8	33	23.4	13.4	4.5	74.2
B	p-tosh	3 to 1	120	2	28.6	37.7	21.6	9.1	3.0	71.4
C	p-tosh	1 to 1	120	2	0	1.0	10	22.2	66.8	100

4. The carbon black (CB)-dispersing performance of 1 wt. % the above-samples was tested in a Haake rheometer using a formulated oil containing components identical to those used in the Example of the specification. The results achieved are shown below in Fig. 2.1.11:

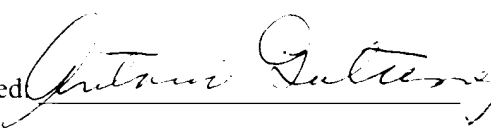
**Figure 2.1.11 Haake Viscosity of Linked Phenols in 2 wt% High MW Dispersant Formulation**  
(Table 2.1.3)



5. As shown, the CB-dispersing properties of the lubricating oil composition were actually reduced by the addition of a linked alkylated phenol compared to the sample containing the high molecular weight dispersant alone. There is nothing in the prior art that would suggest that linked,

polycyclic aromatic compounds provide CB-dispersing properties superior to either unlinked, polycyclic aromatic compounds or linked monocyclic aromatic compounds. Therefore, the improved results achieved with the linked polycyclic aromatic compounds of the present invention are considered surprising and unexpected.

It is declared by the undersigned that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 8/18/03 Signed:   
Antonio Gutierrez